

In re Application of: ROSENBLUH Michael et al
Serial No.: 10/516,942
Filed: December 16, 2004
Office Action Mailing Date: March 28, 2008

Examiner: Mohammed A. Hasan
Group Art Unit: 2873
Attorney Docket: 29033

REMARKS

Reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested.

Claims 241-243 and 272-285 are in this Application. Claims 222-240 and 244-271 have been withdrawn from consideration. Claims 241-243 have been rejected under 35 U.S.C. § 102. Claims 272-285 are new.

Drawings

The Examiner states that the drawings are objected to because some of the figures are shadow and ink mark. The Examiner, however, does not specify which drawing is objected to.

It is noted that Figures 1 and 3-6 are flowchart diagrams which do not contain any shadow or ink mark, Figures 8, 9 and 11-15 are graphs which do not contain any shadow or ink mark, Figures 2a-d and 7 use different fill patterns to illustrate different materials but do not contain any shadow or ink mark, and Figures 10a-b are black and white photographs captured by means of atomic force microscope.

Applicants believe that photographs are appropriate in this application because they demonstrate formation of the microscopic features described in the specification. Permission to file black and white photographs is respectfully requested. Applicants are submitting a Petition to accept Photographs along with this Response.

35 U.S.C. § 102 Rejections

Claims 241-243 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Lawandy. The Examiner refers to Figure 1 and column 3, lines 25-50 of Lawandy and states that Lawandy teaches a microlens formed in a doped glass having at least one metallic component other than copper, the microlens being formed in doped glass by local radiation of a continuous wave laser beam, selected so as to melt a portion of doped glass, thereby to form the microlens. The Examiner also refers to column 2, lines 25-45 of Lawandy and states that Lawandy discloses that the metallic component

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forms a plurality of crystallites surrounding the microlens and that the microlens is transparent to light having a wavelength from about 350 nanometers to about 2 micrometers.

Applicants respectfully traverse the rejection and state that the Examiner has not established a *prima facie* case of anticipation regarding claims 241-243, since Lawandy lacks at least one limitation of the claims.

It is submitted that the Examiner did not consider all the limitations of the claims, contrary to MPEP §2131 which requires that the identical invention must be shown in as complete detail as is contained in the claims. For example, the Examiner did not provide showing for the alleged disclosure of metallic component by the reference.

The claims and the reference are discussed in more details hereinbelow.

Claims 241-243

The following relates to independent claims 241 and 243. Dependent claim 242 is patentable at least by virtue of its dependency on claim 241. Yet, it is submitted that claim 242 is add patentable subject matter, as as further detailed hereinunder.

Claims 241-243 are directed to a microlens formed in a doped glass having at least one metallic component other than copper.

Lawandy discloses a system for practicing a microlens fabrication. A laser is focused to a surface of a substrate, which includes a wavelength-selective optical absorber. While Lawandy teaches semiconductor particles as the wavelength-selective optical absorber, Lawandy is silent with respect to any use of metal. It is submitted that semiconductor particles can not anticipate the metallic component of the claims, because a semiconductor particle is not a metallic component.

Applicants note that although some semiconductor materials are multi-element compounds in which one basic element may be metal (*e.g.*, gallium arsenide, gallium being a metal), these multi-element compounds are not metals since (i) they form

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interpenetrating lattice structures which are substantially different from the structure of metal, (ii) they do not have metallic properties, and (iii) their light absorption mechanism is different from the light absorption mechanism of metal.

Since Lawandy does not teach any use of metal, there is no *prima facie* case of anticipation in regard to claims 241-243.

Regarding claim 242, the Examiner refers to column 2, lines 25-35 of Lawandy, stating the Lawandy discloses that the metallic component forms a plurality of crystallites surrounding the microlens. Applicant respectfully disagrees with the Examiner interpretation of the reference. Lawandy teaches that semiconductor nanocrystallite or microcrystallite doped glasses are particularly attractive, but does not even hint a plurality of crystallites *surrounding* the microlens.

In fact, the whole tenor of Lawandy is the opposite of claim 242. Lawandy explicitly explains that the the nanocrystallite or microcrystallite are attractive because they are transparent at wavelengths longer than the bandgap of the semiconductors. According to Lawandy's teachings, the nanocrystallite or microcrystallite *in* the lens, otherwise they would not contribute to the transparency. To this effect, Lawandy teaches away from claim 242.

It is therefore submitted that claim 242 is neither anticipated nor rendered obvious by Lawandy's disclosure since Lawandy does not teach or imply a microlens in which the metallic component forms a plurality of crystallites surrounding the microlens.

It is submitted that since no amendment was made to claims 241-243 it would be inappropriate to make the next action final.

New claim 284

Claim 284 is directed to a microlens formed in a metal-doped glass. The microlens is transparent to light having any wavelength from about 400 nanometers to about 2 micrometers. Support for the limitations in claim 284 is found in page 20 lines 1-14 and page 31 lines 1-3 of the specification.

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In page 4 of the action, the Examiner is referring to column 2 lines 35-45 of Lawandy. In this passage, Lawandy teaches lenses which can be used at all wavelengths longer than 5500 Angstroms. Lawandy, however, does not teach a lens which is transparent for a wavelength which is below 5500 Angstroms. Lawandy explicitly states that the lens can only be transparent to wavelengths longer than the bandgap of the semiconductor, which is the reason for the 5500 Angstroms limit. It is noted that the 5500 Angstroms limit makes Lawandy's unsuitable for many applications. For example, some CMOS camera operate at wavelengths which are below 500 nanometer.

In sharp distinction, the wavelengths to which the lens of claim 284 is transparent extend to wavelengths which are shorter than 5500 Angstroms. Thus, claim 284 is neither anticipated nor rendered obvious by Lawandy because Lawandy does not teach (i) microlens formed in a metal-doped glass, and (ii) microlens which is transparent to any wavelength from about 400 nm to about 2 μ m.

New claims 272-283 and 285

New dependent claims 272-283 and 285 list some metallic components other than copper, according to various exemplary embodiments of the present invention. These metallic components include silver, gold, nickel, ferrum, cerium and platinum. Support for the limitations of claims 272-283 and 285 is found in page 20 lines 1-5 of the specification and original claims 67 and 75.

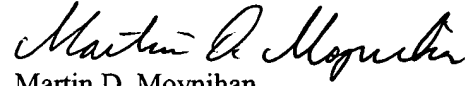
Claims 272-283 and 285 depend from claims 241, 243 and 284. It is therefore submitted that these claims are patentable at least by virtue of their dependency on their parent claims. It is further submitted that claims 272-283 and 285 add patentable subject matter, since Lawandy does not teach a microlens wherein the metallic component comprises silver, gold, nickel, ferrum, cerium or platinum.

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In view of the above amendments and remarks it is respectfully submitted that claims 241-243 and 272-285 are now in condition for allowance. A prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,



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Enclosures:

Petition for Extension (1 Month);
Additional Claim Transmittal; and
Petition to Accept Color Drawings/Photographs.